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Attorney Docket No.: P-4659-US

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s): HASSON, Jaime                      Examiner:                      Not yet known  
Serial No.: 10/026,662                      Group Art Unit: 2661  
Filed: December 27, 2001  
Title: TRANSMITTER HAVING A SIGMA-DELTA MODULATOR WITH A NON-  
UNIFORM POLAR QUANTIZER AND METHODS THEREOF

Mail Stop Amendment  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**INFORMATION DISCLOSURE STATEMENT**

Pursuant to 37 C.F.R. §§1.56, 1.97 and 1.98, this Information Disclosure Statement includes Form PTO-1449:

1. ☐ listing documents including patents, publications and other information for consideration by the Examiner, however, since the subject application was filed after June 30, 2003, copies of United States patents, and/or United States patent applications, and/or United States patent application publications are not included in this information disclosure statement; and/or
2. ☐ listing documents including patents, publications and other information that have been previously cited or submitted to the Patent Office in prior application U.S. Serial No. \_\_\_\_\_, filed \_\_\_\_\_ which is properly identified and relied on for an earlier effective filing date under 35 U.S.C. 120 for consideration by the Examiner; however, in accordance with 37 C.F.R. 1.98(d), copies of such documents are not included in this information disclosure statement; and/or
3. ☒ listing documents including patents, publications, and other information for consideration by the Examiner, copies of which are included with this information disclosure statement;
4. ☐ listing other information for the Examiner's consideration which was cited in a communication from a foreign patent office in a counterpart foreign application, a copy of which is included with this information disclosure statement.

The information herein cited is only in fulfillment of Applicant(s) duty of candor in disclosing all information brought to Applicant(s) attention. This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art". If it should be determined that any of the listed documents do not constitute "prior art" under United States law, Applicant(s) reserve the right to present to the office the relevant facts and law regarding the appropriate status of such documents.

Applicant(s) further reserve(s) the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

In accordance with MPEP Sections 609 and 707.05(b), it is requested that each and every document cited (including any cited in applicant's specification which is not repeated on the attached Form PTO-1449) be given thorough consideration and that it be cited of record in the prosecution history of the present application by initialing on Form PTO-1449. Such initialing is requested even if the Examiner does not consider it to be prior art for any reason, or even if the Examiner does not believe that the guidelines for citation have been fully complied with. This is requested so that each document becomes listed on the face of the patent issuing on the present application and is evidence that the Examiner has considered the document.

This Information Disclosure Statement is being filed:

I) ☒ Within three (3) months of filing the subject Application or entry of the subject Application into the national stage or before mailing of the first Office Action on the merits of the subject Application or a request for continued examination thereof, whichever event occurs last pursuant to of 37 C.F.R. §1.97 (b); or

II) ☐ After the period specified in (I) but before the mailing date of either a final Official Action under 37 C.F.R. §1.113 or a notice of allowance under 37 C.F.R. §1.311 whichever occurs first and;

1. ☐ the undersigned hereby states that each item of information listed on the Form PTO-1449 was either (i) cited in a communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to the filing of this Information Disclosure Statement or (ii) not cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, not known to any individual designated in §1.56(c) more than three (3) months prior to the filing of this information disclosure statement; or

2. ☐ the undersigned hereby authorizes the Patent Office to charge the fee in the amount of \$180.00 under 37 C.F.R §1.17 (p) to Deposit Account 50-3355.

III) ☐ After the period in (I) and (II) but before the payment of the issue fee and,

1. The undersigned hereby states:

a) ☐ that each item of information cited on the form PTO-1449 was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three (3) months prior to the filing of this Information Disclosure Statement; or

b) ☐ that no items of information contained in Form PTO-1449 was cited in a communication from a foreign patent office in a counterpart foreign application, and to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement; and

2. ☐ The undersigned hereby authorizes the Patent Office to charge the Petition fee in the Amount of \$180.00 under 37 C.F.R §1.17 (p) to Deposit Account 50-3355.

**Except** for issue fees payable under 37 C.F.R. §1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-3355.

Respectfully submitted,

  
Naim Shichrur

Agent for Applicant(s)  
Registration No. 56,248

Dated: March 17, 2005

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Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	10/026,662
				Filing Date	December 27, 2001
				First Named Inventor	HASSON, Jaime
				Group Art Unit	2661
(use as many sheets as necessary)				Examiner Name	Not yet known
Sheet	3	of	4	Attorney Docket Number	P-4659-US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (where appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	AR	FREDRICK H. RAAB, "Efficiency of Outphasing RF Power-Amplifier Systems", IEEE Transactions on Communications. Vol. Com-33, No. 10, Oct 1985, pp. 1094-1099	<input type="checkbox"/>
	AS	STEVE C. CRIPPS, "RF Power Amplifiers for Wireless Communications", 1999, USA, pp. 219-250	<input type="checkbox"/>
	AT	D.C. Cox, "Linear Amplification with Nonlinear Components", IEEE Transaction on Communications, December 1974, pp.1942-1945.	<input type="checkbox"/>
	AU	Bob Stengel and William R. Eisenstadt, "LINC Power Amplifier Combiner Method Efficiency Optimization", IEEE Transaction on Vehicular Technology. Vol.49, No. 1, January 2000, pp.229-234	<input type="checkbox"/>
	AV	Bob Stengel, "LINC Linear Transmitter Technology Review", Presented at International Microwave Symposium, Boston, MA, June 11, 2000, pp.1-32.	<input type="checkbox"/>
	AW	S.A. HETZEL et al., "A LINC Transmitter", University of Bristol, IEEE, 1999, pp. 133-137	<input type="checkbox"/>
	AX	S. O. Ampem-Darko, H.S. Al-Raweshidy, "A Novel Technique for Gain/Phase Error Cancellation in LINC Transmitters", 1999 IEEE , pp. 2034-2038	<input type="checkbox"/>
	AY	T. A. D. Riley and M. A. Copeland, "A simplified continuous phase modulator technique," IEEE Trans. on circuits and systems, VOL. 41, NO. 5, pp. 321-328, May 1994.	<input type="checkbox"/>

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\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	AZ	N. M. Filiol, T. A. D. Riley, C. Plett and M. A. Copeland, "An agile ISM band frequency synthesizer with built-in GMSK data modulation," IEEE Journal of Solid-State Circuits, VOL. 33, NO. 7, pp.998-1008, July 1998.	<input type="checkbox"/>
	BA	M. H. Perrot, T. L. Tewksbury III, C. G. Sodini, "A 27-mW CMOS Fractional-N Synthesizer Using Digital Compensation for 2.5-Mb/s GFSK Modulation", IEEE Journal of Solid-State Circuits, VOL. 32, NO. 12, pp.2048-2060, Dec 1997.	<input type="checkbox"/>
	BB	T. Yamaji, A. Yasuda, H. Tanimoto, Y. Suzuki, "A Digital-to-RF Converter Architecture Suitable for a Digital-to-RF Direct-Conversion Software Defined Radio Transmitter", IEICE Trans. Commun., vol. E83-B, No. 6, pp. 1254-1260, June 2000.	<input type="checkbox"/>
	BC	MICHAEL H. PERROTT ET AL., "A Modeling Approach for $\Sigma$ - $\Delta$ Fractional-N Frequency Synthesizers Allowing Straightforward Noise Analysis", IEEE Journal of Solid-State Circuits, Vol. 37, No. 8, August 2002, pp. 1028-1038	<input type="checkbox"/>
	BD	M.H. Perrott, "Techniques for High Data Rate modulation and Low Power Operation of Fractional-N Frequency Synthesizers", PH.D Dissertation, MIT, September 1997, Retrieved from the Internet, URL:http://www-mtl.mit.edu/{perrott/pages/thesis.pdf/, pp. 1-90	<input type="checkbox"/>
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